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Quarter Centennial Anniversary of the American Pomological Society.

Silver Wedding Session Proceedings.

THE Silver Wedding Anniversary of the American Pomoligcal Society, was celebrated in Boston, on the 10th, 11th and 12th of September, with unusual splendor and interest. Never before has there been gathered together so many objects of pomological and horticultural value; while the audience, gathered from the friends and members of the Society, from all parts of the United States, was both the largest and most appreciative of any that have yet attended its meetings. The display of fruit was fairly overpowering, and the exhibition of plants, flowers and decorations in Music Hall, was of the most *recherche* character, well calculated to draw out the utmost enthusiasm. The various rooms where the exhibition was held, were thronged with visitors from the city and suburbs; and it is doubtful if any strictly promological or horticultural exhibition ever drew so large attendance. From eight o'clock in the morning till after ten at night, the fruit and plant rooms were filled with wondering visitors, whose curiosity was stimulated to the greatest stretch, and probably thousands formed a better idea of the great extent of the horticultural interests of the country than could have been gained by any other means.

Display of Fruits.

The display of fruits was exceedingly extensive in varieties, and noticeable for very large single collections. Much of the fruit was small in size, and not as highly colored nor as ripe as we have witnessed in other exhibitions, yet it it was very attractive. The largest single display of fruit was by President Widler, 404 varieties of Pears—occupying the entire half of the lower hall, and on the tables opposite and running parallel, were the collection of Hovey & Co., of Cambridge, numbering 300 plates of nearly as many varieties. Another row of tables was occupied by the collection of the Cambridge Horticultural Society.

Interior View of Conservatory in the Birmingham Botanic Garden.

The capacities of the halls of the Horticultural Society were taxed to the utmost, and all available space was needed. The lower hall was reserved exclusively for fruits of Massachusetts; and in the upper hall were gathered the collections from other parts of the country. The scene here, as witnessed from the platform, was one of great beauty. The rosy-cheeked apples and clusters of grapes were packed close to each other as far as tables extended, vieing with each other in their lovely, yet modest colors—and peaches, pears and plums, with blushes most picturesque, formed *cornucopias* of enticing fragrance and appetizing flavor. The major part of the center table was occupied with the collections from Nebraska—and although over 200 varieties had been spread on the table, yet it was found from the incapacity of the room, seven barrels more remained unopened. Almost equal in other respects was the collection from Kansas and Iowa; all finely colored and well arranged. It seemed exceedingly difficult to decide between the merits of such closely contending exhibitions. The fruits of Kansas were much the largest in size. Those from Iowa, by the Polk County Agricultural Society, were highly colored, yet the collection from Nebraska was so much the largest and extensive, it is not surprising, that the first prize was awarded to it, and the occasion is more than ordinarily noteworthy, since she is but the youngest of all the fruit growing districts of the Union. The display of pears was supplemented by valuable collections from Ellwanger & Barry, Moody & Sons, Smith & Powell, and Clapp Brothers. The latter had on exhibition unusually fine dishes of Clapp's favorite with specimens of some of their other new seedling varieties.

Utah contributed many choice plums, apples, peaches and pears. California was represented by excellent pears, from the orchard of C. H. Reed; while grapes were in abundance, from Canada, Central New York and the Hudson river.

The seedling grapes on exhibition came principally from J. H. Ricketts, Newburgh, N. Y., and E. M. Bull, Concord, Mass. The finest peaches came from Delaware, as also the largest specimens of Bartlett and single varieties. The best display of native grapes came from Canada. Oranges were brought from the Sunny South and received honorary acknowledgment, while even from California, unusually large oranges and lemons were received, indicating the excellent adaptation of that State for their cultivation.

Display of Plants.

The resources in Music Hall were again called into play, to hold the galaxy of plant treasures and decorations, which too, added their share to the charming entertainment of the visitors. Throngs of visitors passed from the fruit halls to the floral hall, and yet again another hall—Wesleyan—had to be engaged to accommodate the promologists in their long discussions. Thus four halls were constantly occupied with floral or pomologist's objects of interest the most of the week.

The display of flowers was in general, both profuse and chaste. Tall tree ferns, palms and agaves, were placed on raised stands, underneath whose branches the audience moved to and fro, almost suggestive to the imagination, of a rich real tropical scene. Around the sides of the hall are arranged frames for holding cut flowers, gladiolus, phlox and dahlias. The varieties of gladiolus interesting us more than any other, were the new seedlings of Geo. Craft, Brookline, Mass., and J. S. Rich-

ard, being marked with the most exquisite colors. Around both lower and upper hall and balconies, these floral treasures were spread—while hanging baskets stood with ornamented plants, and smilax drooping everywhere produced a scene of enchantment. Nearly all the largest florists were represented by displays of choice plants, while the ladies were no less backward in submitting floral designs of bouquets, wreaths and similar decorations. Near the Organ appeared two very large vases, filled with a profusion of delicate flowers and drooping vines, and the periphery of the stage was decorated in a graceful manner, with plants on stands, or glasses, which almost hid its surface from the view.

Probably no scene was ever held in Boston or even in any other city of the country, combining so much truly artistic as this. A poetic correspondent of the Boston *Post*, writing of the romantic suggestions of the scene, says:

Beethoven has looked down with bronze benignity on many a gay scene in the Music Hall, but he has surely never seen anything more brilliant and beautiful than the present floral display. Fancy fairs, with their bravery of coloring and artistic taste of decoration, pale altogether before this wonderful exhibition, and bazars seemed stripped of half their fascination. Luxuriance of foliage and depth and intensity of color fill the place. In the center of the Hall are tall palms, and surrounding them, wonderful tropical ferns, tree-shaped and huge, and foliage plants of all descriptions and kinds. The greens vary from the cypress to the palest tints that are scarcely more than white. Now and then, shining out of the surrounding green, a bunch of blood-red foliage shows itself, some gigantic member of the Coleus family, put on exhibition for its size and beauty. How it overshadows the memory of your plant at home that has been your pride and boast, every red leaf that showed itself cared for more tenderly than the last. Your plant is like a dwarf beside this giant; but after all, it is beautiful still and your own; there is much in that knowledge to reconcile you. Rustic baskets of ivy and other twining plants stand in unexpected places, and trail their greenness down even over the dark floor. Against the sides of the hall are arranged the flowers, a mass of brilliant autumn coloring. Purple asters and self-assertive yellow dahlias, are ranged in queer confusion. Spikes of red and white phlox, looking as familiar as if they were fresh from a well remembered country garden, are in no wise dismayed to find themselves side by side with perfumed lilies, whose satin white petals are flecked with crimson stains; the heart's blood of the dying summer spilt on the blossoms of her latest, sweetest plant. Gladiolus make banks of brilliant beauty, ranged along the foot of the first balcony, and are a gay background for the green plants in front of them. The platform is filled with tables holding choice bouquets and table designs, in which were tube roses, their perfume striking through every other odor, until the air was languid with its richness; carnations and purple heliotrope, delicate tea roses with petals as exquisitely tinted as seashells, and a delicate perfume that was rather a suggestion of odor than odor itself, shy mignonette, and with it all the fairylike green of the smilax, or the deeper tint of some other foliage. At the back of the tables were pots of New England ferns, all the varieties that are found in our woods; still holding, even in their exile, something of the pungent fragrance that characterized them in their home by some mountain brook, or down in the quiet,

shadowed valley. A climbing fern at Beethoven's feet is ambitiously trying to reach his height. Vain attempt; it stops short not more than quarter of the way up, and droops its green, tiny flowers in sheer weariness and disappointment. Delicate maiden's hair shows its fairylike traceries against the brown of the organ carvings. The scene is lovely from every point. It is the luxuriance of perpetual tropical summers, and the glories of the sadly miscalled temperate autumns. One has grown rank and large in scarcely varying warmth; the other brilliant with the fervent, burning heat of the short New England summer. Prettily-dressed women are wandering up and down the improvised garden walks, or are leaning over the balconies looking down into fairy-land. They tell secrets under the shade of spreading palm trees, who have hitherto been content to exchange confidences under pine, or elm or maple. They talk of winter costumes while standing by a tropical fern, and are alternately enthusiastic or matter-of-fact, as they vary their conversation from autumn flowers to autumn cares. They play at cross purposes with life here as well as elsewhere; but the flowers, even, are brighter for the gay, human presence, and surely that group of pretty girls are prettier for their surroundings."

Discussions, Entertainments.

Amid so many objects of delight, it was difficult to bring the attention of the delegates closely down to thorough business. The audience was constantly changing. Horticulturists drifted away and spent a day at Forest Grove or Mount Auburn Cemetery, others could not resist special invitations to the residences of Mr. Payson, E. S. Rand, Jr., Chas S. Sargent, Hovey & Co., while the entire society, to the number of 200 or more indulged in one day's festivities, with breakfast at the residence of Wm. Gray, Jr., with an afternoon's ride and dinner at the far-famed Italian gardens, lakes and conservatories of H. H. Hunnewell, at Wellesley. Of the entire catalogue of fruits, only apples, pears and grapes were discussed, and these not thoroughly. Essays were almost entirely omitted reading, although there was much disposition to call for them; the order of business was so changed that the former process of starring was totally discontinued. This will hereafter be done by the proper fruit committees. In open convention the members in discussion have liberty to make remarks for or against any variety, mainly to show reason why its position in the society's catalogue be changed.

President's Address, Premiums.

The President, in his most happy mood, felicitously described the progress of the Society up to the present time, and contrasted it with the marvellous results shown in the production of fruit everywhere throughout the Union. He mentioned at length the efforts for production of new seedling fruits and recommended increased attention to this branch, preferring that we depend more upon our own native sorts than on foreign stock Where formerly we were obliged to rely upon imported kinds for our best fruit, now they are disappearing and new sorts take their places.

Of the 43 kinds of plums in our catalogue, more than half are American; of 58 kinds of peaches, more than two-thirds are American; of 19 kinds of strawberries recommended by the Society, all but three are American; of 31 varieties of hardy

grapes all are American; thus, out of 151 varieties, all but 37 are American. In the publication of its catalogue and revision of fruit, the Society has done much more than the public have given it credit. In 1848 there were but 54 varieties of fruit recommended. Now the catalogue contains 577 worthy kinds, and 625 varieties have been rejected, making a total of 1,202 varieties, upon which the society has set its seal of approval or rejection.

The system of giving premiums was very generally discussed and by unanimous vote, the Society is hereafter *forbidden* to appropriate any of its funds to the purpose of cash premiums for the display of fruit. But in lieu thereof, the Society have adopted a medal, known as the Wilder medal, to be given to all objects of merit which include both fruit, new seedlings and best essay.

The business transacted by the Society was most thorough and complete, settling beyond all questions in satisfactory and harmonious manner, subjects which had long excited comment and considerable difference of opinion. The place of next meeting is definitely fixed at Chicago, in 1875, and likewise there will be an extra session at Philadelphia, at the great Centennial Exposition.

The exercises terminated with a banquet on Friday evening, in Music Hall—given by the Massachusetts Horticultural Society to the members of the American Pomological Society—nearly 1,000 persons were present and both music and social conversation passed away the time most enjoyably, until late at night. Thus closed this most brilliant session of the Society. Its Silver Wedding was appropriately celebrated, and the close of the first quarter century finds the Society in most successful and popular standing, the strongest and most influential organization of its kind in the world.

Serious Damage to a Vineyard by Lightning.

A NEAR neighbor of mine has a very promising young vineyard, rows ten feet apart and 360 feet long; about midway of the length of the vineyard stands a small chestnut tree 20 feet from the outside row of grapes. On the 26th of June, we had a small thunder shower, this tree was struck by lightning, which came down on two sides of the tree, causing the death of the tree and at least two-thirds of the vines in three rows of the vineyard; the vines in these three rows are trained to wire, the balance of the vineyard is trained to wooden slats and escaped injury; the vines at the extreme ends of these three rows suffered as badly as those near the tree; the row nearest the tree was set this last spring, many of the vines not yet reaching the first wire and are supported by stakes. I notice a number killed in this row, where neither the vine or fruit was touching the wire. The ground where the tree stands is being used for Irish potatoes; they also suffered, the vines being killed immediately under the tree and three rows on either side to the distance of 75 feet; from this freak I would judge it is not safe to have any trees standing near a vineyard where wire is used, though a similar occurrence might not take place in the next century. I am of the opinion if wire had been used for the whole of the vineyard the damage would have been much greater, from the fact that the third row from the tree is 40 feet and suffered about as bad as the nearest one.

Bowling Green, Ky. A. D. WEBB.

Interior View of Conservatory in the Birmingham Botanic Garden, England.

AN American gardener feels a thrill of interest in reading the descriptions of the finished Conservatories and Botanic collections so famous on the European continent. Whether it is owing to lack of skill, culture or interest here, among American gentlemen, it is yet true, that our merchant princes rarely ever lay out or provide such elaborate display as do the princely families of England and Germany. There may be pecuniary ability, yet an American hates detail, and it is easier to take care of his capital in bank stock, and once led in this line, all income and simple interest follow in the same groove. And yet, while we seem to look longingly to the beautiful picture of conservatory wealth and floral treasures across the waters, yet, our English cousins seem to take pride in devoting part of their ample grounds to the *American garden.* Thus, though copying from each other, yet we are approaching one another in interest and unanimous sentiment.

Mr. D. T. Fish, writing to the *Gardener's Chronicle,* a sketch of the plant curiosities at Birmingham. says: Art and Nature have worked together to create a charming variety of terrace and dell, rolling ground and level plains, retired roseries, and such American gardens, smooth archy ground, and freshly exhumed rocks, clothed with ferns and crowned with foxgloves. This admixture of the color of the foxglove with the green of Osmunda regalis and other ferns, was one of the most valuable hints I picked up at Birmingham.

I had introduced this before but not in such bold manner. The effect was charming, and but for the sameness of many of the masses of sandstone rock, it would have appeared most natural. The furnishing of those 12 acres of ground was as varied as their character.

In one spot, the last examples of carpet, summer or spring bedding, or grouping in masses; divided by straight lines, as seen near the conservatory, were formal beds on the terrace, greened down to sobriety by intervening spiral yews; close by, hanging ribbons on the slope. A few steps more, a fine *Picea nobilis,* 50 feet high, *P. Pinsapo* of rare growth or stature, five *Thujopsis borealis,* stately Magnolias; Anon vilas in masses, Lilies and *Forget-me-Nots*; a peep at botanical rarities, in beds or groups on a lower level, and then such masses of Rhododendrons and Azaleas as one seldom sees; while throughout all and connecting all, as a beautiful thought or idea, governing a life, is the green turf in charming sloping glades or widening sweep of beauty, inviting repose.

But the crowning beauty of these most interesting gardens is the great Conservatory, with aquarium in the rear; the former a modern house of great beauty of structure and most elegant proportions. The entire structure is highly ornamental, this beauty being much enhanced by portions being picked out with chocolate and gold.

The furnishing of the Conservatory was in keeping with the outside, and it contained many excellent examples of good cultivation admirably arranged. Among the finest specimens were the following Ferns:

Dicksonia Antartica.
" Squarrosa.
" Arborescens, rather rare and noble.
Alsophila Australis.
" Excelsa.
" Contaminans.
Cyathea Medullaris.
" Princeps.
Cibotium Regale.
" Spectabile.
" Schiedei.

And enormous plants of Platycerium alcicorne, seldom seen in such size and condition. What the Dasylirion anotichum was like is seen in the wood cut.

There were likewise very fine plants of Phormium, one of P. tenax variegatum, and of P. Colensoi variegatum, and noble specimens of Cycas revoluta, Latania borbonica, Sabal umbraculifera and other palms. The beautiful Lasiandra macrantha was well done, and quantities of an old-fashioned showy plant, the *Diplacus*, not puniceus, but glatinosus, made a fine display on the shelves. A charming old plant, Plumbago capensis was also remarkably well flowered. The roof of the aquarium, or Lily home, attached to the Conservatory, was well covered with climbers; prominent among these was a very fine variety of Passiflora quadrangularis, this seemed different and larger than the sort generally grown.

Allamanda, Schottii and the Stephanotis were extremely well done in this house, a good effect was produced by the little used and curious Aristolochia ornithocephali. Bottle and Smoke Gourds were also seen to good effect on the roof in company with the Souly green cucumber. In the tank were some plants of Nymphœa dentata, *N. Cærulea* and others, and a seedling of a beautiful and delicate pink, of the size of dentata, said to be a seedling between N. dentata and N. rubra. Over the tank various baskets of Stanhopes were pushing grand masses of flowers, and I got a new idea of basket-furnishing, the bottom and side filled with Epiphyllum crowned with a graceful plant of Adiantum æthiopicum. Among the Palms, were tastefully arranged a fine plant of the very rare *Stifftia chrysantha*, and last and best of all, probably, for health and size, a noble specimen of Pandanus utilis. Among the orchids and dendrobinus was D. Speciosum, a hardy New Holland Orchid, very useful for winter flowering.

Moranta, Caladium, Dracæna, were well represented, and the collection of Mexican and other Ferns, was rich and extensive. Among the latter, *P. Andromedifolium*, an exquisite California Fern. Here, too, I met with the little grown Aspidium, fragrans, whose fronds are as sweet as if perfumed with the essence of violets.

Report of the Committee on Pear Blight, its Cause, Remedy or Preventive.

HON. MARSHALL P. WILDER, President American Pomological Society:—

Dear Sir—The Committee appointed at the last annual meeting of this Society, to investigate the cause of pear blight, and, if possible, recommend a remedy or preventive therefor, beg leave to submit as follows:

The task allotted to your committee is connected with unusual difficulties, as the subject is one that has for more than a quarter of a century remained an unsolved problem. We therefore entered upon the performance of our duties with the conviction that our efforts must fall short of doing justice to the object in view.

Pear blight assumes different forms and has consequently different causes for its origin. One form attacks trees *gradually;* its approach is slow and may be detected for months, and often during the preceding season of growth, before the tree is fully affected. This form, which may be termed gradual blight, is seen at all seasons during the period of active vegetation, from early spring until September. Its progress is usually arrested by a liberal top-dressing of liquid manure, so far as the roots extend and a severe cutting back of the branches. This must be done whenever the tree assumes an unhealthy appearance. The cause, then, may be safely attributed to exhaustion, and the remedy consists in replenishing the exhausted supply of plant food. This form of blight is often noticed in orchards left unworked and where the annual or biennial top dressing with fertilizing agents has been withheld.

Another, and this is the most fatal form, attacks a tree or a portion of it suddenly, causing the affected part to blacken in a few hours after the tree is struck; this is commonly termed *Fire blight*. This form is periodical in its attacks and migratory, as it seldom remains permanent in a locality, but leaves an interval of from ten to fifteen years between its occurrence. Its greatest intensity is on its first appearance, which occurs usually when the fruit has attained half its size; it decreases as the season of vegetation advances, but reappears again the following summer with less of its previous intensity. After decimating a section of country during two consecutive seasons, there will be an interval of a series of years, during which, blight in its other forms may occur, but there will not be a wholesale destruction as during the prevalence of epidemic blight. Every observation tends to the conclusion that fire blight is caused by zymotic fungus, whose presence is not detected until life is destroyed in the affected parts. This form offers a wide field for the investigation of microscopists, and from their future labors, we hope to arrive one day at the origin of this fungoid growth. We are unable to arrive at a satisfactory conclusion, as to what peculiarities of soil and temperature induce the favorable conditions for the development of this fungoid vegetation.

In the Experimental gardens of the Department of Agriculture at Washington, the following mixture is prepared: Place a half-bushel of lime and six pounds of sulphur in a close vessel, pour over it about six gallons of boiling water, adding enough cold water to keep it in a semi-fluid state until cold. It is used as a wash and applied to the trees and branches as high as can be reached. It should be applied two or three times during the summer. Since this preparation was used, no trees thus treated have been lost, although small limbs not coated with the mixture were attacked and destroyed. Carbolic acid has also been used without any perceptible difference in the result from the lime and sulphur mixture. Boiled linseed oil, applied to the trunk and limbs has been tried near Norfolk, Va., with marvelous cures, as reported. We mention this instance of the use of an extraordinary ingredient resulting in good effects, as contrary to what is usually the result when using this application upon the body of trees, its effects being to seriously injure the tree if it does not destroy it.

Still another form of blight is doubtless caused by mechanical action, by the rupture of tissues consequent to a sudden superabundant flow of sap. This attacks

only our most thrifty growing trees, either in early spring, when vegetation first becomes active, or after a period of drought and partial stagnation of vegetation, when abundant rains suddenly force out a luxuriant growth; moderately vigorous trees are never attacked. It is often noticed in very vigorous trees that the bark of the trunk is split longitudinally; whenever this is apparent, such trees are always free from this form of blight, as the pressure upon the cellular and vascular tissues has been relieved. From a series of experiments commenced in 1857, it is demonstrated, that whenever trees whose bark had been longitudinally incised and divided, never showed any signs of this form of blight.

Peculiar methods of culture undoubtedly influence the causes of blight; but upon this there exists a wide range of opinion. Clean culture and repeated stirring of the soil, while it may in many instances be conducive to most beneficial results, will often cause a total destruction of a pear orchard. In seasons of zymotic fungoid or fire blight, highly cultivated trees fall early victims to the scourge, while those cultivated in grass with an annual top dressing of manure usually escape the contagion.

The third form of blight caused by mechanical action is seldom found in orchards where the soil is left undisturbed, but is so common in gardens or where the trees are thoroughly worked, that it has become only a question of time for the entire destruction of one's orchard.

In the Southern States this form of blight is the most destructive, as it has become endemic to all highly cultivated soils. Wherever the land is allowed to become coated with grass or weeds, but kept cut down every few weeks and an annual top dressing of manure is applied, the result has been most satisfactory in an abundant crop of fruit and an almost entire freedom from blight.

P. J. Berckmans,
Josiah Hoopes,
Committee.

Five Summers in the Land of Flowers.

BY OLIVER TAYLOR.

AN article in this month's issue of The Horticulturist, by Al Fresco, I consider calculated to mislead, by failing to tell the whole truth and give the reasons therefor. That I can tell all the truth on the subject I don't pretend, but what little I have learned I feel it my duty I should honestly tell, and in so doing I desire to be distinctly understood, first, that I am not interested nor endeavoring to injure any land speculation in the State, and secondly, that I am naturally a sanguine person, and thirdly, I have been engaged in horticultural pursuits all my life, and that is not much short of one-half a century; nor do I expect to make my home in other northern climes because 'tis there easier to accumulate a fortune.

Orange growing in Florida has been the subject of much speculation, and to the

novice to-day is much of a puzzle to explain, and why? The climate and soil of Florida are very peculiar, and therefore but seldom understood until experimented with. The sandy foundation is so porous and devoid of nutriment; the surface where much sand exists necessarily gets so hot in summer, that everything decomposable in it must decompose with the united effects of the powerful sun and abundant moisture, always present in the air to such a degree that plants must do or die, in a very short time; and this is why 'tis called the land of flowers; the majority of plants bloom ere they grow often one-tenth of the height they do farther north. I have often seen blossoms larger than all the other foliage on the plant. This forcing process so carbonizes the vegetable matter that goes to fill up the marshes, that the marsh mud is not as valuable when applied to plants as one would suppose, though it be all made from vegetable deposit.

This muck when dry is a powerful absorbent of ammonia, and this explains the cause why it often injures plants when first applied too abundantly, close to the bare roots of trees. I have heard of several persons injuring their young orange trees by such applications. If finely pulverized and saturated with ammonial manure it acts finely and lasts longer than any manure I know of here.

The low wet lands and those but two or three feet above the water level, where the wild orange is found in the thick hummock, with often immense live oaks six and eight feet through, with a sandy subsoil always wet, if cleared and exposed to the sun, will not make a permanent grove without ditching and manuring to an amount per acre, that deters even very enterprising persons from undertaking it. At Sand Point, most of the inhabitants prefer planting in the dry pine woods, and there with sufficient manure they do best, and this want of sufficient manure is the great drawback to extensive orange growing. To grow cattle to an extent sufficient to produce an amount of manure, requires one to live so far from their neighbors that life is too lonely, and the necessaries of life that come from a distance too expensive. Cattle ranges in so thin a soil must necessarily be far apart to get the proper amount of food. The thinness of the soil generally throughout the State, will cause the producing of oranges to be so expensive, that an abundance of fruit will not soon be raised sufficient to supply all the inhabitants of the State, though they are shipped off for sale as much as possible for the sake of the money they bring. A large per cent., often one-third of the fruit on a tree, cracks open before ripe, and those that are shipped do not bear transportation as well as oranges raised in dryer climes. I would never advise any one to go into orange raising to make a living in Florida, unless they can secure some of the few favored spots where Indian mounds have made a deeper soil, or some river deposit furnishes an abundance of suitable soil, which seldom occurs. That orange trees will produce in poor sand is not reasonable, and in this town I have been shown one grove of 50 trees that have been planted and the ground kept clear of weeds for 25 years, yet they have not produced a peck of oranges, yet. I found nearly all the women living in what is considered the best sections for orange growing, quite glad to leave the country for good, and seldom could I find a man that had been on his place five years, but would gladly sell for one-half cost.

Injured Apple Trees.

I HAVE in former articles, in various horticultural publications, called attention to the tall, old, and in quality of fruit, not the best apple trees in New Jersey, damaged by causes that operate in the feebleness of age, and whose value as orchard or dooryard trees had ceased. And I wrote certain articles ridiculing the want of thrift in these matters in that State, which suffered these trees to stand. Last year I saw whole orchards dead or dying in New England, by a cause more serious than that in New Jersey. This year the blighting cause is severe, which began only two years since in the inexhaustable lands of Central New York, and is now threatening us with a similar loss. It is not a thing to be looked for with us in all the wheat region of this large State, that an apple tree should cease its healthy foliage, and a reasonable fruitage, no matter how old it may get to be; but last year, and this year also, it is quite a common sight to see trees in a decline, with stunted, yellow leaves, dead ends of small branches and occasionally large limbs dead. And, as in New Jersey and Massachusetts, the cause is not very apparent. I see, too, that it is quite common to speak trivially of it, as in the July, 1873, number, of the monthly report of the Agricultural department, where this disease with others is not spoken of as diseases, but as "the intense cold of last winter, and in the southern sections of the country, late severe frosts and freezes in the spring." "Vast numbers of peach trees and *many apple trees* were killed outright." Others speak of being "killed to the ground" by the cold, not to quote others equally in error. Now we apprehend that while the frost and cold may damage the blossoms and kill them, and injure to a certain extent, the foliage of the apple; so hardy a tree is not so commonly killed in limb or "to the ground" by the effect of the winter only. And that it becomes all intelligent writers to feel that these generalizations of "hard last winter on apples and peaches, the late frost," and "hot sun of early spring, did the damage," and other like expressions, are but mere confessions of their ignorance; that knowledge must go beyond these more vague guesses, which are from immemorial barefaced assertions. It is as true, that "the corn died because it was planted in the old of the moon" or "in the wrong sign" (when neither "the sign" nor "the moon" had the least knowledge of any corn planted on the face of the earth), as to repeat *the old moon story* or the *everlasting sign*, over the death of trees and vines, merely because "the winter killing" was the last of a series of causes, or not the great cause; this is contemptible if viewed in its proper light. It is honorable to say the winter of 1872–3, was followed in the spring of 1873, by a loss of vigor in apple trees, and in many cases by the death of the tree "to the ground," for then the writer acknowledges indirectly, that he is ignorant of the cause of death. It is correct, that a man, say Col. Live-long, died very old, but to say "he died of old age" is absolutely false, for there is no disease of that name, and not one of the human race dies, unless disease is in some form the cause of death. He is almost a fool in knowledge, who asserts such absurdities, solely as causes of death.

We say not this in the emphatic way we have just written it, to wound the feelings of any one, but as a bitter medicine to cure the evil of hastily attributing to our climate and to our winters, what does not properly belong to them. We also

say it, because we shall never reach the cause of "apple tree blight" if we are not sensible to the stupidity of such statements. "Apple tree blight" has driven the appple largely out of Europe. It is coming, and from the east, westward, in the line of moderate and not severe climacteric influences, sweeping the trees of their reliable certainty of fruitage, and in certain regions almost or quite destroying the trees. And we must attribute the cause not to winter's extremities, but justly to "oyster-shell louse," to "minute insects at the root," and such causes that undermine the health, as tubercle in the human subject poisons the whole body, and does it in a way not easily discovered, and I apprehend that the cause or causes are not yet rendered plain to us all by anybody. My own trees until last year were vigorous, they are now dying; have clouds of a minute fly rising near night from the ground over the roots. Yet I am by no means certain they are *the cause of all the trouble.* It is also true, that two trees, whose roots are intertwined with those of very large vines (Isabellas) which lost their tops, which were so large as to run seventy and eighty feet, and whose stumps and roots are dying of Phylloxera, are the worst affected of all those trees. Yet, I am not sure that the dying vine roots and the dying apple trees are affected by the same insect.

Nor am I willing to admit that it is any change in soil that is the cause. Nor local causes, for so general an evil. I only mean by this article to assert that we need to have such trees carefully dug up, and the cause, be it what it may, determined, if the present apple tree loss is to be completely understood. We need professional entomologists, not only, but competent men in every department of causes, to investigate and report *accurately*, not *by surmises.*

S. J. PARKER, M. D.

Blight in Fruit Trees.

EDITOR HORTICULTURIST:—The blight in fruit trees has caused a great deal of thought and investigation by fruit growers for many years. Many preventives and remedies have been suggested and many causes assigned for the disease, all appearing reasonable at the time, but liable to explode the next year. It has been argued by some, that wet seasons are more conducive to blight than dry ones. This theory don't work well; last year being a rather dry season my apple trees blighted very badly; this year has been unusually wet and they are entirely exempt from blight. I have a small pear orchard of some 300 trees, all dwarfs mostly, six and seven years old; thus far I have not lost a tree from blight; I might say I have had none of it in my orchard; they have passed through wet seasons and dry seasons unharmed, while a neighbor of mine has several hundred pear trees from 12 to 15 years old, mostly standards; he has had but little blight until this year; very nearly all his trees are now seriously affected, so much so, that he fears the entire loss of many of them. Thus it appears that the blight works in a mysterious way, and has not been satisfactorily accounted for by the knowing ones, and I fear never will be. Nor is it probable that an effectual preventive will ever be discovered.

Bowling Green, Ky. A. D. WEBB.

Orange Culture in Florida.

A RECENT number of the *Rural South Land* contains a letter from a gentleman who has been pensding the winter with Colonel Hardee, of "concussion" celebrity, near Jacksonville, Fla., from which we extract as follows: "Your correspondent, J. B. R., makes inquiries relative to the budding and grafting of the orange. Now, I cannot speak for your State, but budding and grafting is a perfect failure in Florida, compared to the sweet seedling. The well known Dummett's grove on Indian River has eighteen hundred budded trees in full bearing, being about twenty-five years old, and the largest yield it has ever made was one quarter million oranges. This year it only produced one thousand, while Hart's grove just opposite Pilatka has only four hundred trees, sweet seedlings, occupying four acres, produced an average of two thousand per tree, and brought Mr. Hart every year from $9,000 to $12,000.

"But persons planting the seed for seedling trees should be careful in selecting the seed from seedling and not budded trees, for the latter is not reliable, often producing sour oranges. The seed from Hart's grove planted in Florida will produce a better sweet orange than the original. The Mandarin orange does not succeed in Florida, compared to the large Smyrna, which in my judgment is the largest, sweetest and finest orange in the world. I have made arrangements to plant a large grove of this variety, and would respectfully advise your correspondent to do the same. Colonel Hardee thinks that August is the best month for transplanting the orange, and I should judge so from this fact: Last August Colonel Hardee contracted with Mr. S. V. White to plant and warrant to live and to do well for one year one thousand sweet Smyrna oranges, six months old, from the seed, then about eighteen inches to two feet high. This month Mr. White ordered five hundred more of the same oranges, and as there was sickness in the colonel's family, he requested me to take up six hundred, the one hundred extra was to replace the dead ones, when I found to my surprise that there was very few if any dead; the few that looked badly no doubt would have come out this spring from the roots. The rest were looking well and growing finely."

The Phylloxera.

SINCE I wrote the article published in the last HORTICULTURIST, I have been anticipating the appearance of the insect; but have been unable, to this date, August 12, 1873, to find a single specimen, either on root or leaf of the vines in Southern Cayuga Valley. Nor in my July visit to Washington, could I find a specimen at Williamsport, Pa., where I saw fine grapes in door yards; nor on the way to and from Washington. Of this I am sorry, as it will prevent a more accurate description of the insect from my pen. The consequence is, that the growth of leaves and canes is very healthy and the clusters of grapes remarkably clean, large, and with the promise of fine ripening, though in the Cayuga Valley the season is backward and nights so far in August, cool. It, too, devolves on those situated in any part of the United States, where the insect this year can be found in any degree, to supply the information now so much needed of its habits, devastation and consequential ruin of all the hopes of the vineyard. I regret to see that even the intelligent observers of Hammond's Port, N. Y., while they speak of the

excellent state of the vines and grapes now, seem to be ignorant of this insect, so abundant with them year before last. They speak of "winter's damage," etc., without reference to this as a cause.

This season answers the inquiry of our European correspondent, "Does the Phylloxera injure vines every year in America?" This season says no! Only in exceptional years, and, so far, at periods of eight to twelve years; then it comes as a thief in the night, and ordinary American citizens fail to detect it, it is so small and obscure. Please report who can find this year, this insect.

S. J. PARKER, M. D.

The Vine in the Orient.

THE sacred record does not state positively that grapes grew to perfection in the garden of Eden; but there is very strong extrinsic evidence that such must have been the case. The soil and the climate were admirably adapted to the growth of the vine; and profane history declares that from the delightful regions along the sunny banks of the Euphrates and Tigris men went forth in various directions to people the earth, carrying with them religion, civilization and a knowledge of the arts and agriculture. Prominent among these arts was that of making wine; and dear to those ancient worthies was the custom of using the fruit of the vine as a wholesome beverage, and rendering thanks for it as a divine gift. True, that good man Noah was a little indiscreet on a memorable occasion; and his successor, the righteous Lot, betrayed a similar weakness. But those were exceptional abuses of a bounteous gift that was designed to cheer and comfort, as may be fairly deduced from the inspired utterance, "He sendeth wine that maketh glad the heart of man, and bread which strengtheneth man's heart." Bread to strengthen, and wine to gladden! Strength without gladness would be a mere possession without the power to enjoy it.

But what were the methods of cultivating the vine and the modes of manufacturing the gladdening beverage in those earliest ages is all left in obscurity. Not until about the time of the Greek Homer did any one appear to record these modes and methods in due form for the information and gratification of subsequent generations. At that time the Grecian peninsula, with numerous islands sprinkled over the Ægean sea, and portions of the Asiatic mainland were already inhabited by a highly cultivated and practical people, whose science, art, manners and customs were embalmed in the unrivalled epics, the exquisite lyrics, the exciting dramas, and the graver histories embraced in their literature which has been preserved and may be read and known by all men. If these merry and enthusiastic admirers of Bacchus are to be trusted, and the busy American of the nineteenth century has the leisure to peruse their testimony he will find, among other things, that: Great care was exercised in selecting the ground for a vineyard; that the soil might be of the most desirable quality; that the exposure might be faultless; that the tender vine might be protected by nature against the ravages of the most dangerous and destructive winds and storms; that an unfailing supply of water might be near to defeat the disastrous consequences of a possible drought; and that all the rules suggested by science and deduced from experience might be so carefully followed that the temperate and frugal proprietor could confidently rely upon his vineyard as a sure source of comfort

and competence. In proportion to its extent of territory, peninsular Greece gloried in a great diversity of soils and climates. Almost entirely surrounded by seas, it had a surface made up of mountain, valley and plain most skillfully arranged; and a soil of clay, sand, loam, or of volcanic origin, any one of which soils might be encouraged to produce excellent grapes; but the variety of vine selected, and the treatment administered, must be judiciously adapted to each particular case. A hillside looking towards the southeast, and possessing a volcanic soil, frequently received the preference. The spot must be especially protected against the north, northeast and northwest winds, either by abrupt hills or natural forests, or by groves or other defences reared for that very purpose. And then, to bar the inroads of beasts and lawless bipeds, a thick thorn-hedge was planted around the vineyard, and a deep ditch enclosed all. Within was built or dug the wine press, with the huge vat to receive the expressed juice; and a tower was erected where the watchman might guard the grounds against the depredations of birds, beasts and thieves, precisely as indicated in the Scripture parable of the vineyard that was let out to husbandmen.

The ground was carefully cleared of all trees and foreign plants and roots, except in those cases where trees were to be employed for training the vines; and then such as were required were pruned and allowed to remain. The soil was sometimes trenched and always subdued and mellowed, and enriched if necessary. As the vineyard, when once planted, was expected to last for several generations, it behooved the original planter of the vines to bestow labor, care and expense with a liberal hand.

When the chosen ground was a hillside, it was usually terraced, and thus, like the famous hanging gardens at Babylon, or the vineclad hills of modern Switzerland, it added to the general aspect of the country a charm of beauty to be relished by native and stranger; and at the same time brought health and independence to the possessor.

There were three principal modes of training the vine, viz., on trees, on trellises and on stakes; and not unfrequently old family vines, that were cherished as heirlooms, might be seen climbing up walls, or adorning the front and sides of the peasant's cottage. Then, when the scorching rays of a summer sun had compelled the laborer to seek the cool shade at noon-day, he would be instinctively attracted to his own cottage door, and there, while enjoying an hour's repose, he might regale himself upon the luscious clusters hanging temptingly within his reach.

The slips were set with an eye to their future training. If they were to be supported by stakes, they were planted in rows and near to each other. If trellis was to be used, the slips were placed near each other, and in rows at a considerable distance apart; and when the vines were to twine about trees, they were separated much further asunder, and sometimes without much regularity, according to the taste or fancy of the proprietor. Doubtless each rustic endeavored to exhibit his independence and gratify his own peculiar notions and whims in the planting and training of his vine, being quite as loftily conscious of his rights and importance as are any of the 40,000,000 of American sovereigns who are living twenty-five centuries later; but there are reasons for supposing that the vine was often trained upon trees where

the ground was an inclined plane exposed to the sun and having a calcareous or volcanic soil; for this would best secure the vine and fruit against the intense heat incident to such an exposure and such a soil.

From the numerous and fragmentary statements of the Greek and Latin writers who have discussed the subject, it appears that the methods of planting, training, cultivating and pruning the vine, and the rules for manufacturing and preserving wine among those ancient peoples of Greece and Italy were as various as those now in vogue among wine-growers, and not widely differing from them; save that the theories were less complicated, and the vine was allowed to grow more strictly in accordance with the dictates of nature. That grapes were successfully cultivated in Western Asia thirty-three centuries ago is conclusively proved by the authentic narrative concerning the cluster of Eshcol.

As the vine is indigenous to the southern and western portions of Asia, and the southern half of Europe, including Greece, Italy and Spain, it is highly probably that the native variety was first cultivated in each particular locality. In due time improved varieties were gradually introduced from other sections, and the coarse native was forced to give place to the more highly refined foreigner. Accepting the testimony of the early historians, poets, and writers on horticulture, we conclude that the very choicest wines were produced in some of the Ionian Isles and in favored parts of Italy. Those spots were near the sea—a fact suggesting that the peculiar richness, flavor, bouquet, and mellowness so much extolled were due to the sea's influence. Among the Greeks, the places oftenest mentioned with affection because of the vines they produced, were the islands of Thasos, Lesbos, Chios and Cos; and the perpetual recurrence of these words in prose and poetry, wherever wine is the theme, furnishes evidence that writers, readers and hearers were keenly alive to the merits of the god so constantly in their minds and on their lips; and that they could make nice distinctions between wines of different flavors and ages. One might almost venture to affirm that any of those joyous old philosophers who were at all in the habit of attending public festivals or private banquets could name the year in which a genuine glass of wine was manufactured, provided it were not more than fifty years old. At all events they would cheerfully guess the age on being presented with an additional goblet: and it was their unanimous opinion that old wine was not only more grateful to the palate, but also more wholesome and invigorating. Nestor, one of the grand characters in the Odyssee, is found drinking wine ten years old. On other occasions, wine sixteen, twenty-five or fifty years old is set before the guests.

Among the Latin authors, Horace never grows weary while praising his fine old Massie and Falernian; numerous places in Latium and Campania were noted for the excellence of their conies, and thereby it came to pass that the sound of the proper adjectives, Caecuban, Fundanian, Setinian, Alban and Slatinian awakened lively emotions in the minds of poets, generals, statesmen and philosophers. Among the Romans, Cæsar, Pliny, Virgil, Horace and Cicero,—and among the Greeks, save the divine philosopher Socrates, were fond of good wine, drank it themselves and sanctioned its use, but were severely temperate and exceptionally faultless in character. Such a beverage was believed to be ennobling and not degrading to those who indulged moderately. It therefore becomes a matter of interest to know the art of making and preserving wine, and the rules for enjoying the presence of this social divinity so often counterfeited and so lavishly calumniated in modern times.

H. M. W.

THE WESTERN HORTICULTURIST
MARK MILLER EDITOR DES MOINES, IOWA

The Dueberry or Trailing Blackberry.

A CORRESPONDENT in a P. S. to a business letter wishes to know if the above named fruit is indigenous to Iowa, or whether its culture is known in the State. The trailing or ground Blackberry, as it is or was usually called in New England, is an old acquaintance of ours. Its fruit there is of higher quality than that of the high bush-blackberry. It is not, so far as we know, found growing wild in this State; we obtained plants from the east in 1864. It grows luxuriantly here, but produces no fruit. In New England it is generally found the most productive in the poorest soil; it might bear fruit on the sandy, gravelly, knobby land, occasionally met with in this State. But it shows no fruitfulness on our ordinary soil. On the other hand, we find it an intolerable nuisance. It literally covers the ground with a net-work of vines, and appears to be no less tenacious of life than does the Canada thistle. Cutting up the vines two or three times during the season appears only to invigorate its growth; our advice is to let it alone. We will thank any one to take what we have of it, and pay a premium for its eradication from our ground to boot.

Is Grape Culture and Wine Making a Failure in this Country?

THE direful effects of two sharp night-frosts at the end of last April, in the wine districts of France and Germany, causing the loss of no less than two-thirds of the presumable crop for 1873, together with the oft-repeated failures which assail the vintner of those countries, through early and late frosts, rot, mildew, insects—of which the Phylloxera is no mean individual, naturally raises the above question in the mind of Americans, who would prefer to rely upon the productions of their own country for a gentle and agreeable stimulant. I now propose to examine and answer it to the best of my observations and practical experience, for the satisfaction of my friends who desire to continue in this line of business.

There are a great many progressive undoubters who will be surprised by the caption under which I write. To doubt the ability to grow grapes and to make native wines is something beyond their comprehension, and smacks strongly of—let us say it—a great deal of ignorance, with what has been accomplished within the twenty years. I will say at once, to relieve their mind, that the question is not whether grapes can be grown and wine made, but whether it can be made to pay.

We know but too well that many have been severe losers, others utterly ruined in the laudable effort to nationalize grape culture and wine-making; yet, from experience, I sincerely believe it can be made to pay; in fact I know it. But before I can show how that result, in my estimation and experience, is to be reached, let us consider, briefly, the many causes which have worked detrimentally to retard or arrest the healthy growth of that new branch of business; knowing many of the causes which have been an impediment, we may in a measure guard against their repetition.

Let us begin with the vineyardist, and see the many errors in the vineyard. First, the difficulty to know whether he wanted a wine grape or a table grape for a handy market. The Catawba having already met with a certain success in some portions of the country, was chosen, and planted everywhere, at random—in low lands, side hills and table lands; the risk of the soil being unsuitable was freely taken, in many cases not even inquired into. To supply the demand plants were made of sound or diseased wood, as the case might be; of ripe and green cuttings; the same was done of the many new plants which carried public favor; and, worse than all, as soon as they began to grow they were made to furnish their own quota of plants, weak, feeble, worthless plants. Then they were subjected to a style of pruning, cutting, breaking, slashing, pinching, etc., which only proved the immense energies of the vine; the wonder was and is that they were not killed outright—but to finish them sure, deep plowing, tearing and mangling the roots out of the soil was resorted to, in and out of season, in times of drouth, with a dog-day sun, the soil being baked as hard as a brick—whilst a crop, double the size it should be, was making the reckless attempt to mature on well abused vines. And people wondered that their vines became sickly, subject to rather light frosts, rot, mildew, insects etc., and in many instances, within the last few years, failed to come up at all, utterly ruined, dead.

Next, with the vintner, the trouble was his inexperience in wine making; grapes not sufficiently ripe, unsuitable or musty barrels; then the pernicious theory of gallizing, which has done more to destroy the reputation of native wines than all or any other causes whatever; wine made with sugar and water, under pretext of reducing the acids and pungent or foxy flavor, making a beverage no longer containing the healthful element—in due proportion—intended by a careful and beneficent nature, and, unless with an excess of alcohol, no longer in a condition to keep, often turning sour on the hands of the vintner, or soon after he sold it, especially if the purchaser kept it on tap, like beer, without ice—which often proved to be the fact instead of having it bottled as all good wines should be. Add to this the natural, however absurd, prejudice of foreigners—our new made citizens, against drinking anything in the shape of wine that is native, preferring their own, often adulterated wines, simply because they are French, German or Italian wines; and our own people being sufficiently foolish to believe that no wine is good or fashionable unless it be European, preferring tea or coffee, the products of foreign climes, for a table drink, and common and poisonous corn whisky for a stimulant—and you have some of the many drawbacks which have caused thousands of acres to be returned to grass or corn. The picture is not certainly exaggerated. Let us quietly enquire

how it could be improved and made to pay? I have now in my mind an experiment which has been carried on for the last six years by an intimate friend, with intelligence to direct and means to establish, and I will refer to him and his vineyards to demonstrate the truths I wish to impress on my readers. The first thing that attracts the attention of the stranger is the admirable selection of soil and situation of these vineyards, known as the White Elk vineyards, and situated some three miles north of Keokuk on the bluffs which skirt the western shore of the Mississippi as far as Montrose, and facing the river, which they almost reach by a steep descent. The scenery of the country is very picturesque and presents a surface strongly rolling and naturally drained; this is no prarie with a level surface and a strong, black, rich vegetable humus, causing a rank vegetation. On the contrary the soil is of a light colored clay loam, with an admixture of sand from the sandy marls of the loess which forms that dry calcareous soil which a long experience has proven to be well adapted to the growth of grapes, as it also contains a sufficient quantity of the oxyds of iron, which ought never to be absent from those wines which have the pretension to be medicinal. There are seventy-three acres in grapes chiefly Concord, Catawba, Clinton, Ives, Nortons and Delawares. The work is done under different squads of men, everything systematically and at the proper time; there is no slashing, breaking or even pinching done during time of growth; the pruning is done soon after the crop is gathered; the plowing and cultivation is thorough but of a light character; the soil is always loose and no weeds are suffered; and, in anticipation of mildew, the vines are regularly sulphured by means of De Lavorgue's bellows. No wonder that with this systematic care and treatment the vines are full of vigor and of fruit, notwithstanding the trying weather, and other miseries which vines have had to encounter for the past few years. As a vineyard it is a success; a very limited loss of vines and a great production of fruit, the Concord for a red wine, and the Catawba for a white wine predominating, they being without a doubt our preferred national wines.

The press house and cellars are a model of convenience and neatness; the same orderly spirit which commands over the vineyards is to be seen there; the cellars have a capacity of one hundred thousand gallons. It is the object and pride of the owner of these vineyards to turn out nothing but pure native wines. Dr. Gall has no footing there, the wines are real wines and not like a good deal of stuff in the market, a mere mixture of sugar and water. Those I tasted I esteem a pure well-made article, much to be preferred to many imported wines; they appear to contain sufficient body and the necessary quantities of acid so refreshing to the inner man on warm sultry days. Had such wines been made from the start in this country, instead of that shoddy article known as "gallized," native wines would stand far higher in general estimation than they now do, and only in this way will they have a chance to become appreciated, and resume their position as some of the fair and remarkable wines of the earth.

Most of the wine is neatly bottled, and is sold by the case, thus obviating the risk of having a good wine spoil through the ignorance or carelessness of the buyer; only to wholesale buyers who are known to understand the treatment of wines is it ever sold by the cask. Treated in this way alone will vineyards and native wines

pay. The small vintner has had his day; it requires means either single, as in this instance, or by association, to do the subject full justice, to command labor, skill, science and all the necessary machinery to deliver the wines to the trade or to consumers ready for consumption.

Our vast country certainly contains many an excellent position, and soil suitable for grape culture, the climate of this portion of the Mississippi Valley being temperate and healthful, sufficiently warm and genial. The time is probably not far distant when our long line of bluffs, on both sides of the river, will be mostly occupied by vineyards for the production of pure native wines; of grape brandy so preferable, in its moral and physical effects upon man, to common whisky; wine vinegar, so palatable and preferable to other forms of vinegar; of grapes for the table, and raisins which will be largely shipped to less favorable parts of the country, thus creating a safe, steady and important business, which will make of lands hitherto considered the poorest the most productive and valuable in this section of Iowa and Illinois, commanding as much per acre as the best prairie lands. The future lies before us; success is certain to follow the skillful and enterprising. It is certainly within our reach.—E. Baxter, in *Rural World.*

Influence of Stock on Scion.

I HAVE been much interested in the notices given from time to time as to the influence of the scion on the stock, and *vice versa*. In the early vinery here we have a couple of Muscat vines worked on the Black Hamburg, and in the same house we have a Muscat on its own roots. Those worked on the Hamburg started fully five or six days in advance of the one on its own roots, although they are nearly a fortnight behind the Hamburgs they are worked on, each of which has a rod of its own in addition to the Muscat worked on it. The stock would therefore appear to have forwarded the Muscat about a week; although I have never seen any difference in the ripening of the two, nor any effect on the fruit, yet the growth appears more robust and the leaves of better texture. In the late house we have a Hamburg worked on Lady Downe's. The Hamburg has shoots varying from three to six inches in length, in exactly the same stage as the other Hamburgs in the same house, while the rod of Lady Downe's filling the next rafter, on the same roots as the Hamburg has to draw its supply of sap from, is only just starting its buds; showing clearly, in this case, that the lateness of the stock has had no influence in retarding the earlier habit of the Hamburg.—*Gardener's Chronicle and Agricultural Gazette.*

Time of Picking Apples.—A writer in the New York *Tribune* tells us that G. W. Browning, of Luzerne county, Pa., some years since accidentally discovered that winter apples picked some five or six weeks before the usual time of gathering, would keep sound some months longer than those allowed to ripen on the trees.

Since that time he has picked his apples early, and reserved them for the spring and summer market, thus obtaining much higher prices than if sold in the fall or winter. Whether any effect upon the flavor and quality of the fruit was observable, is not stated.

Cherries in Michigan.

AT the June meeting of the Michigan State Pomological Society, Mr. H. S. Chubb read a paper on cherries, in which we find the following items of interest to Michigan fruit growers:

Of the twenty varieties of cherries mentioned in the appendix to the report of the Michigan State Pomological Society of 1871, only four or five have been proved profitable for market purposes in Western Michigan, so far as my observation and experience extend. While I would not recommend the extensive planting of varieties that have not been proved profitable, it is not amiss to have a few of the choice kinds for experiment. It is, however, with cherries as with strawberries and some other fruits; the strong acid varieties are most prolific, the surest bearers for market and domestic purposes, the most profitable.

The choice, sweet cherries, although very desirable as table fruit, are not, in my experience, a very sure crop, and being subject to the depredations of the birds are seldom profitable, while the acid varieties are regularly good bearers, and being almost free from the attacks of birds and boys, generally remain on the trees until gathered. When thoroughly ripe they are of a very rich flavor.

The Early Purple Guigne appears to have become the variety in the southern portion of the Michigan fruit region, and its regular bearing and its good flavor render it an excellent and profitable variety. Of the sweet cherries, I presume it is the best that can be cultivated profitably in this region of the State, so far as ascertained.

The Early White Heart is a small sweet cherry, valuable for its earliness, but not desirable for extensive planting on account of its smallness.

Kirtland's Morello is a short-stalked variety, but I have failed to discover any superiority in it over the common Morello. In fact I did not find it a sure bearer. One objection to it is the smallness of its leaves, a serious defect in a climate subject to early scorching sun. The fruit forms before the leaves protect it and the sun scorches the fruit, stunting its growth and causing a loss of a large portion of the crop. One advantage of the Morello cherry over all others, I think, is its adaptability to a northern aspect. It will flourish in almost perpetual shade, and can be planted on the north side of a wall, house or barn with decided advantage.

Mr. F. R. Elliott, of Cleveland, in the report of the Department of Agriculture for 1867, describes several varieties of cherries not mentioned in the list of our society just referred to. Of these the Kirtland just mentioned is one, and the Archduke, another. The latter he describes as the best of the Duke cherries. I presume the late Duke mentioned in the society's list, may be the same variety, but Mr. Elliott claims that is incorrect, and it bears early in July, and cannot be called a late variety. The Archduke is described as "large, round, heart-shaped, compressed, dark, shining red; stem, long and slender; flesh light red, slightly adhering to the pit; tree vigorous, healthy upright grower, with long, broad, oval, dark, rich green foliage, slightly serrated, and the petioles a little bronzed. In sections where the more tender class of sweet cherries fails to succeed, this variety supplies a want and offers superior claims to cultivation. The true variety is somewhat

rare, as the common Late Duke is often sold for it." From this description I think the Archduke would be a very desirable variety for this region of country. Its dense foliage would aid very much in securing the perfection of the fruit in our usually dry June season.

The Ohio Beauty is another variety spoken of by Mr. Elliott, not mentioned in the society's lists. It is described as 'large, round, obtuse, heart-shaped; suture, slight; color yellow light ground, mostly overspread and somewhat marbled with dark rich and pale reds; stem rather long and slender, and set in a deep open basin; flesh yellowish white, tender, juicy, delicate, sweet, with a rich, fine sprightly flavor, pit small, oval; season, last of June. Tree healthy, hardy, vigorous, rather a short jointed grower, forming a round, open-headed tree, comes very early into bearing and produces abundantly. Originated by Mr. V. P. Kirtland, of Ohio, in 1843." Mr. Elliott states that as far as he could learn, it has proved superior to the claim made for it by its originator. In no place that he could learn of, has it ever shown any sign of disease, and it is reported as being grown successfully where the Black Tartarian and Elton have failed. I should judge from the description that the Ohio Beauty would be a valuable acquisition to the varieties of the Michigan Lake Shore region, and recommend its trial. It is so large that it would, as a light colored cherry, be greatly preferred to the White Heart, and its leaf, although not so large as desirable, is perhaps sufficiently large for all necessary protection.

The light sandy soil of our Lake Shore region appears to be peculiarly adapted to the cherry tree, and the cool climate of the Lake Shore is peculiarly a cherry atmosphere. I should prefer shade and protection from too much sun as a general thing for producing perfect cherries, as the slower in arriving at maturity the larger and better is the fruit.

The planting, pruning and cultivation of the cherry differ but little from those of the peach, and no special directions are needed to a society composed of peach-growers. The cherry is so much at home in Michigan that nothing but ordinary care and culture are necessary, and no tree perhaps suffers so little from neglect as the cherry. It will grow on the roadside, on the lawn surrounded by grass, or anywhere where an ordinary maple tree will grow, and thrive as well.

Cherries in Southern Ohio.

AT the April meeting of the Cincinnati Horticultural Society, Mr. Keller said that he had three varieties of cherries which did remarkably well with him, at his place near Miamiville, viz.: the Black Tartarian, the Early May and the June Duke. He also alluded to the early purple Guigne as a good and profitable kind. It ripens very early; is a good bearer, and is nearly black when fully ripe. Mr. Jackson had four varieties of cherries which did well with him. The May Dukes (the kind here spoken of); the Black Tartarian; the English ox heart, and the early May. Mr. Price made mention of a magnificent cherry tree of great age, which he had seen growing on bottom ground, nine miles from Cincinnati, in Kentucky. It was sixty-four feet across the lower part of the branches. It was always loaded with fruit when cherries were not killed by frost.

Pear on the Thorn, Imported vs. American Pear Stock.

BY B. A. MATHEWS, KNOXVILLE, IOWA.

ED. WESTERN HORTICULTURIST:—In regard to Bartlett and F. Beauty, on the White Thorn, I have quite a number of fine, large trees of each sort. Some of them are grafted into the limbs of large thorn trees, others again I sawed off five or six feet from the ground and then grafted the new shoots. I have ascertained that they should, by all means, be allowed to grow two years after being sawed off in this way, in order to obtain vigor and thriftiness, otherwise the stock is apt to fail sooner or later, thus, of course, killing the entire tree. Again, by keeping the Thorn tree closely pruned, after grafting in the limbs, it will die. Again, one or more limbs of the Thorn may fail from too close pruning, thus giving the appearance of blight. Some, perhaps, without investigating, would think it was blight, still I am satisfied I have had more or less limbs on my trees to die of blight. When blight attacks a limb it does not, necessarily, injure the tree much, merely confines its ravages to that particular limb, descending only till it comes to the Thorn stock; it can then be removed without damaging the rest of the tree. I have not thus far been damaged any of consequence by blight.

If I had known many little things when I commenced grafting on this stock that I know now, I could have many more trees than I have; for instance—experimenting with fifty or more varieties, but few of which would do on the Thorn; grafting many others the first year after sawing off; keeping others too closely pruned, not allowing them leaves enough to elaborate the sap thrown into the tops of the trees, thus killing them out. In this way many valuable stocks were lost, and much labor and expense incurred that I could avoid now. I would not graft but very few varieties of the Thorn out of all I have tested.

In orchard nearly all my trees are on Pear stocks, imported from France. Would have no trees on American stocks. This idea might not be popular among some nurserymen, but I notice some of the leading American nurserymen are advertising trees on foreign stocks for sale this fall, Hanford, of Columbus, Ohio, among the number. He has found out that he can raise trees successfully on no other stock. M. B. Batcham, his predecessor, tried many years to raise Pear trees, and expended thousands of dollars without accomplishing anything. The point, though, is not simply to raise trees in nursery, but in orchard.

I have never yet seen a sound and perfect American Pear stock, while foreign ones are as pure as could be desired. No nicer trees can be raised than may be grown on Mountain Ash, but what are they worth?

I believe in *Anger's* Quince for dwarfs. No other Quince will answer. For standard imported Pear stock, no other Pear seedlings for me. It might be well to experiment with Mountain Ash, Thorn, Juneberry, etc., much might be learned by it.

GRASS AND CULTIVATION.—Mr. W. Parker, Vinton, writes us: "There are some things in my observations among the orchards in this region inexplicable. One orchard in cultivation is badly injured, another near by in grass not damaged—another orchard under the best of cultivation in perfect condition, and a neighboring orchard in grass badly killed out." Who can reconcile these strange results of grass and culture?

Pears—to Prevent Rotting on the Tree.

TO an inquiry in the Southern *Cultivator*, for a preventive of rotting of the pear upon the tree, and to cause it to ripen up, W. A. James, Bisbopville, S. C., says, "strip the bark entirely off the bodies of his pear trees, on the 20th of June, he will find that most, if not all, the crop upon them will ripen that season. Be careful not to scratch the wood with the instrument used in starting the bark, as it will make an ugly scar in the new bark, which will form in a few days after the old one is removed. I generally start about two feet from the ground, and strip both up and down, letting it run up the limbs as far as it will, and as deep into the ground as it can. There will be no risk of killing the trees, if done at the time indicated.

"I stripped the bark from a pear tree on the 20th June, 1854. It was still living when last heard from. I have performed the operation repeatedly, but the new bark grows back so soon and the tree looks so natural, that unless you particularly mark it, it would be impossible ever to tell it again. I once had a large nectarine tree that bore full invariably, but never matured any fruit, until after it was barked. That year it ripened all the fruit. The next year it was full of healthy fruit again, but a storm during the summer up-rooted it, and I lost it. I hardly think the barking process will shorten the life of a tree, but if it did, it would be better to enjoy some fruit than none at all."

Pruning and Thinning.

ED. WESTERN HORTICULTURIST—In the June number of THE HORTICULTURIST, I noticed an able article on "pruning and thinning." If I had dictated that article it could not have met my view upon the subject of the pruning man more fully. The article is just what might be expected from the source from which it emanated, I am satisfied as to the good results of properly pruning fruit trees. I have a nurseryman's catalogue before me, in which he facetiously denounces pruning a "propensity to whittle." I am always glad to read a well written and sensible article on any subject concerning fruit growing; I say ditto to every line of your article, its teachings are in accordance with my own experience of many years.

Cedar Rapids, Iowa. T. PADDINGTON.

HOW THE DOCTORS "DEW" DISAGREE.—At a meeting of the Alton Ill., Horticultural Society, Mr. Hyde took decided issue with Dr. Hull on the apple question; would not raise a Newtown Pippin—could get two bushels of Willow Twigs where he could get one bushel of the Pippins; was in for the paying apples; Willow Twig would fetch double the money, though inferior in quality.

Long: Had trouble in selling the Newtown Pippin before its quality was known, but now it sold with him more readily than any other apple.

Starr: Found no money in the Newtown Pippin—Ben Davis filled the bill with him.

Editorial Notes.

Better than Expected.

The Rhododendron display on Boston Common, last spring, was more successful, financially, than we supposed. Over $7,310 were realized, and of this $1,534 was clear profit, which was presented by Mr. Hunnewell to the Treasury of the Massachusetts Horticultural Society. This is a good showing.

The Martha Grape.

Fruit coming from Virginia, of this variety, have been selling for twenty-five cents per pound, very steadily. The commission men are confident it will always bring a good price, no matter what its flavor may be.

The Ives Grape.

This grape is becoming very popular with dealers. It proves to be a better shipper than the Concord, the flesh is more firm, not so likely to break, and will carry further into the interior. Buyers will always prefer to get the Ives as long as it lasts, and with Concord, side by side, the Ives will always be sold out first.

National Horticultural Society.

Quite a strong feeling now prevails among horticultural circles, to assist in the formation of a National Horticultural Society, to hold its session in alternate years with those of the American Pomological Society. Many have mentioned this topic to us, and at Boston, during the session of the American Pomological Society, the idea was broached with considerable force. We would, personally, be glad to see such an organization created, and handsomely supported. It seems to be imperatively needed, for it has a sphere of wide use and influence, and in no sense will it conflict with the claims or the popularity of the American Pomological Society. The latter mainly confines its attention to fruit. The other aims only at a consideration of the more ornamental portion of horticulture—flowers, trees, plants, gardening, etc. We believe most of the working members of the American Pomological Society would join the new organization, and we think superior talent could be called out to properly officer it, and give it dignity, literary character, and an extensive influence. We would propose for such an organization the name of S. B. Parsons as president, and Josiah Hoopes as secretary. Such a force will draw popularity everywhere.

New Pear, Souvenir du Congres.

Specimens of the fruit of the new Pear were recently forwarded to us by Ellwanger & Barry, of Rochester, N. Y. They ripened in the house, after keeping two weeks, and developed a fine golden color, with touches of crimson on the cheeks, producing a very handsome and attractive appearance. The Pear is very large,

nearly as much so as two average Bartlett's put together, have very tough skin, and from this fact, we would judge it to be very excellent for market, standing shipping finely. The flavor is only fair to good—not as juicy as the Bartlett. As it ripens one week before the Bartlett, we judge this to be its principal value and recommendation. The tree, as we have seen it in various places, is a good grower, healthy, and we judge, will be very productive. We would class it as a very fine early market pear to ripen before the Bartlett.

Essays before the American Pomological Society.

It is our purpose to publish in THE HORTICULTURIST all the Essays presented at the last Session of the American Pomological Society, in Boston. One or more will appear in each number until all are published. Many of them are valuable, and we think no one will regret the space we give to them. Those on Pear Blight are particularly instructive. The public will learn with pleasure that the Hon. W. C. Flagg, of Illinois, Horticultural Editor of *The Prairie Farmer*, was appointed Secretary in place of F. R. Elliott. In the absence of Mr. Flagg, by sickness, the Editor of THE HORTICULTURIST was appointed Acting Secretary for the session.

Any who have information or papers they wish submitted for publication in the reports of the American Pomological Society, can transmit them to this office, or to Mr. Flagg, Mr. Barry, or Mr. Wilder, and they will be acted upon by the proper committee.

Pronunciation of Names of French Roses.

Quite a number of Roses with French names are now cultivated in America, and yet few know how to pronounce their names correctly. We here give the names of those best known:

Name.	Pronounced.
Alfred Colomb,	Ahlfrod Colong.
Charles Verdier,	Charle Vare-de-a.
Charles Lefebvre,	Charle Lehfavre.
Comtesse Chabrillant,	Contess Shar-bree-yong.
Eugene Appert,	Eoo-jane Appare.
Eugene Scribe,	" Screeb.
General Jacqueminot,	Jan-a-ral Jark-me-no.
Jules Margottin,	Jule Margottang.
Marechal Vaillant,	Mar-aè-shal Vay-yong.
Meyerbeer "	May-yare-beer "
Sombrieul "	Sombreool "

Growing Cranberries.

A subscriber having asked us what were the cost and profits of Cranberry culture? We answer him as follows: 1. A good cranberry marsh must be made out of boggy, peaty land; sand must be carted upon it to the depth of six inches, and then the plants set out. The bed must also be so situated that a stream of running fresh water may be turned upon it at proper times to flood them entire, to prevent attacks of insects or frosts, and be as quickly shut off and drained. 2. The lowest cost per acre is $300 for a bed well prepared. From this upward to $600 and $1,000 per acre have often been expended. 3. The yield in bushes increases gradually, from twenty bushels the first year, up to 100 or more in the fifth year. Average price of cranberries $3 per bushel to the producer. It requires three years' time to get a good bed well planted and in producing condition, and the income is from $60 to $200 per acre for three years after that; after the sixth year, $300 to $600 per acre.

Horticulture as an Ally of Agriculture.

One of our exchanges says: In the public mind there is some confusion in regard to the respective missions of horticulture and agriculture. A recent writer has put the case this way: Horticulture does not begin where agriculture ends; but one takes

its start from our necessities. We are to get our bread by the sweat of our brow. The other starts from our mental life, and goes down to meet our physical wants as represented by farm culture. Be this as it may, horticulture, even in this transcendent sense is a great aid to agriculture. The principles of plant-life; the sciences connected with culture; thousands of little experiments connected with great practical results, are much more likely to originate in the garden than on the farm, and for which the farm is largely the debtor. To a certain sense agriculture acknowledges its indebtedness to its intelligent sister, for while the horticultural exhibition rarely condescends to include objects of pure farm-life, the agricultural fair takes in all fruits, flowers and ornamental garden work.

Cure for the Mealy Bug.

J. M. Jordan communicates this practical information to *The Gardener's Monthly* that *alcohol is a cure for the Mealy Bug*. He says he has removed these pests from thousands of the most delicate stove plants without injury to the latter, simply by applying frequently, for a few weeks, "alcohol diluted with five per cent. of water." The most convenient equipment, he thinks, is a fine brush put through the cork of a wide-mouth bottle.

Large Tomatoes.

A gardener near Irvington, N. J., has succeeded this year in raising Trophy Tomatoes of enormous measurement. One cluster of eleven, on one branch, weighed thirteen pounds nine ounces; a single specimen measured 25¾ inches and weighed three pounds.

Congress of Rose Growers.

A grand Congress of Rose Growers was convened this summer, at Lyons, France and met with excellent success. New varieties seemed to receive little favor, for out of fifty shown only four were deemed worthy of recommendation.

To New Subscribers.

Any who can influence new subscribers to THE HORTICULTURIST are informed that, by subscribing now, the remaining numbers of this year, with all of 1874, will be sent for $2. Copies, in clubs of two, for $3.50, and three for $5.

Are Dwarf Apples Desirable.

The *Tribune*, in discussing this subject, virtually admits that they will not pay for market purposes, but in the private garden, nothing in the way of fruit trees is more ornamental than a finely formed specimen of dwarf apple in full bearing. The fruit is always of larger size and more beautifully colored than when grown on the usual free root, and therefore, for exhibition purposes, they must excel. Some growers prefer their trees worked on the Paradise apple, thus making a smaller tree, and one that is more readily kept within proper bounds; but, says the nurseryman, the plants are so small and trifling that our customers want something more showy for their money, and we are in consequence obliged to use the Doucin root, which enables us to grow a larger tree within the same space of time. But this larger size is at the expense of quality, for nothing but severe root-pruning will keep them within proper bounds. The borer is more severe on the Dwarf root than on the Standard, and must be closely watched; branches should have an annual shortening in; roots must be curtailed; and, lastly, the soil should be enriched every season. Thinning out the fruit is an absolute necessity; bearing in mind that we want only extra fine specimens, therefore the inferior sized fruit must be taken off before we commence removing those well shaped. Now what kinds shall we plant? The most satisfactory is derived from Summer and Autumn varieties, as we grow them for pleasure more than profit, and only those should be selected which are handsome in appearance.

Floral Notes.

Culture of Lilies.

A correspondent of the *Rural New-Yorker* has been very successful with lilies planted in a deep bed formed of rotten sods, gravelly loam, leaf mould and a small portion of rich compost. While the buds are growing, the bed is watered with weak liquid manure. A single bulb of Lilium auratum, undisturbed for four years, had increased and borne more than seventy flowers. The varieties of L. lancifolium had also succeeded finely, and given a profuse bloom.

The Perfume Crop.

The *London Garden* quotes Dr. Schomburgh's report on the Botanic Garden at Adelaide, Australia, for the statement that 150,000 gallons of handkerchief perfume are consumed yearly by Europe and India, and the revenue from imported perfumes in England is estimated at a quarter of a million dollars. The immense material used for these scents are jasmine, mignonnette, verbena, rose, heliotrope, rosemary peppermint, violets, orange, etc. One acre of jasmine has produced over a thousand dollars; violets, eight hundred dollars; and other plants largely, but less in amount.

Sweet-scented Tulips.

A writer in the English *Journal of Horticulture*, speaking of the sweet-scented Tulip, says: "I last week had the pleasure of inspecting at Laurel Bank, the picturesque villa residence of A. Stirling, Galashiels, an unnamed sweet-scented Tulip, the like of which I do not recollect having met before. Tulips usually are void of any pleasing odor. None that I am acquainted with merits being classed with sweet-scented flowers. This at Laurel Bank is equal in fragrance to the finest-scented rose. Mrs. Stirling, who is a great lover of flowers, and a good judge of them as well, told me she preferred it for the delicious perfume which it emitted, as a cut flower in the rooms, before any rose. It is growing in an outside border in rather a shaded position, where it was placed some years ago. In form the bloom is semi-double; in color an orange ground prettily striped with chocolate. It would be much appreciated in our conservatories and room vases, or wherever odoriferous flowers are in demand."

Training Vines over Windows.

A lady writer in the *Rural New Yorker* asks why the people, both in city and country, do not train vines over their windows. "What is more beautiful than green leaves falling around the casement in graceful festoons? Grape vines clambering over a trellis are very fine: but, if a grape vine is out of the question, the next best thing is a hop vine, that being free from the objectionable creepers that push out from woodbines and attach themselves to clapboards and shingles. I have a luxuriant hop vine now, which requires no care save a dish of suds poured upon it occasionally, that shades two of my kitchen windows; and the cool tendrils cling so closely to the house, with the aid of a friendly nail and string here and there, that it makes closing the windows, even in a storm or shower, wholly unnecessary, securing a capital ventilation of the room both day time and night. And there is such a silky, sociable rustle of the leaves all day, that I like to sit close up to them and listen to what they say, as I have a notion that everything has a voice and language of its own. Then fill a few vases with roses, and place them out on the window sill; and the green background makes a delightful, reviving picture."

Care of House Plants.

A lady in Kansas gives her plan of caring for house plants, as follows: "I live in a frame house, and last winter kept fifty pots of different kinds of geraniums, roses, fuchsias, and remontant pinks, all of which received the same kind of treatment, and in the spring my plants were more healthy and the leaves a dark green color.

Many came to me for slips in preference to the greenhouses. Every two weeks all the winter I would take a handful of tobacco stems and steep them by pouring boiling water over them until it looked like strong tea, then, when the tea cooled enough to bear the hand, I poured it over the plants. Sometimes the leaves would wilt for a few moments and then straighten out and have that bright fresh look they have in summer after a shower. Then I would weaken the tea a little more and wet the ground in the pots, and I have no red spider nor green fly."

Solution for Destroying Insects.

Mr. Cloez, of the garden of the Paris Museum, gives in the *Revue Horticole* an efficacious recipe for destroying plant-lice and other insects. Three and a half ounces quassia chips, and five drachms staves-acre seeds, in powder, are placed in seven pints of water and boiled down to five pints. When cooled, the strained liquid is ready for use, either in a watering-pot or syringe.

Pond Lilies Easily Cultivated.

Phineas Field, of East Claremont, writes to *The New England Farmer* as follows: "If you admire pond lilies (and who does not?) and have a springy place in your mowing, by digging a hole so that the water will stand from six to twenty inches deep in the same, and by setting roots in the bottom, you may have a supply of fresh ones through the season of blooming. Old roots will blossom the first season. One half day's digging four years ago, has supplied me abundantly, and now I have hundreds of young roots."

Difference in Exposure.

A bed about ten feet across cut in the lawn was planted with tulips and hyacinths. In spading manure into this, fall and spring, it had become raised, so that when the surface was rounded off the center was some eight inches higher than the circumference. The same kinds of bulbs were planted all around, and while the hyacinths upon the south and east portion were in full bloom, those upon the north side were just opening, there being one and two weeks' difference caused by this slight elevation.

A Glowing Picture.

A lady writer from the Isle of Singapore gives the following glowing picture of tropical flowers in "Fruits and flowers of the Tropics," published in *Lippincott's Monthly:* "We gathered whole handfuls of the Lotus or Water Lily, with its pale blue, golden or rose-tinted blooms gleaming up from the sparkling waters. There are many varieties of this exquisite flower—blue, pink, carnation, bright yellow, royal purple fringed with gold, and more beautiful than all, pure virgin white, with the faintest possible rose tinge in the center of each section of the corolla, a just perceptible blush, as of its own conscious loveliness. The last is the royal flower of Siam; borne before the king at weddings, funerals, and all state festivals, and the royal reception rooms are always beautifully decorated with the young buds arranged in costly vases of exquisite workmanship. In moist portions of the jungle were whole groves of fragrant pandanus, ferns of infinite variety, a species of wild mignionette, spotless japonica, fragrant tuberose, cape jessamine, wild passion flower, the calla Indica, with its five long petals of heavenly blue, then the innumerable company of roses, tea, moss, perpetual, cluster, climbing, variegated, and a score of others, queenly still even amid such a gorgeous array. The Victoria Regia and Rafflesia Arnoldi, the two largest flowers in the world, we saw in Dr. A's garden—the flower of each two feet in diameter. Rarest of all was the night-blooming Cereus. There were six blooms in full maturity, creamy waxen flowers of exquisite form, the leaves of the corolla of a pale golden hue, and the petals intensely white. Its wondrous perfume is exhaled just at nightfall, and readily discernible for a mile. The odor partakes largely of that of lilies, violets, tuberose, and vanilla. It reaches perfect maturity about an hour before midnight; at three o'clock its glory is beginning to

wane; at dawn it is fading rapidly; and by sunrise only a wilted, worthless wreck remains."

A New Style of Pansy.

The London *Journal of Horticulture* says: M. E. Benary, a horticulturist, at Erfurt, announces a new Pansy, which has large flowers of a splendid ultra-marine blue, with a well formed eye of very deep violet-purple. They are also of good substance, have strong stalks and stand well above the leaves. M. Benary has named it *Viola tricolor, var. maxima Emperor William*, and states that the variety reproduces itself with certainty from seed.

A Poisonous Plant.

A few years ago there was in the Royal Botanical Gardens, at Kew, a specimen of probably the most poisonous plant ever introduced into England. It was the Jatropha urens, the properties of which are so noxious that its possession is positively dangerous. The ex-curator of the gardens was one day reaching over it, when its fine, bristly stings touched his wrist. The first sensation which he felt was a numbness and swelling of the lips; the action of the poison was on the heart, circulation was stopped and he soon fell, unconscious; the last thing he remembered being cries of "run for the doctor." Either the doctor was skillful, or the dose of poison injected not quite, though nearly, enough to cause death; but afterwards the young gardener, in whose house the plant was placed, got it thrust into a corner, and would not come within arm's length of it. He watered the offender with a pot having an extremely long spout. In a short time, however, the plant disappeared altogether, and another specimen of the genus Jatropha, which was afterwards introduced, vanished in the like mysterious manner. It was presumed that the attendants were secretely determined that such plants should not be retained in the houses, to cause the possibility of an accident such as that which happened to their curator.

Fruit Notes.

Destroying the Coddling Moth Worm.

Dr. LeBaron says, in the *Prairie Farmer*, that half and probably more than half the apple worms have escaped from the apples before the apples fall; hence he thinks the importance of picking up these apples or of allowing hogs to run in the orchard, has been overestimated. As to another mode of destroying these worms, he says:

"Soon after the young worms have entered the apple, which they generally do at the calyx end, they begin to throw out their castings through the hole which they made in entering. As this hole must be originally very small, it is evident that they must enlarge it for this purpose. A portion of these castings adhere to the rough and shriveled calyx, forming a rust-colored mass which can be easily seen from the ground beneath. Some horticulturists, among whom we may mention Mr. Oliver Chapin, of East Bloomfield, N. Y., and Mr. L. Barnes, of Bloomingdale, Ills., have availed themselves of this circumstance for the purpose of removing the wormy apples from the trees before the worms have escaped. Mr. Chapin's plan is to beat off the wormy fruit, but Mr. Barnes adopts the method of picking them off by means of a wire hook attached to the end of a pole. These methods can be usefully combined by first jarring or beating off those apples which readily fall, and then going over the trees a second time with a pole and hook. The apples thus removed should, of course, be fed to swine, or otherwise treated so as to destroy the worms within. Too much value cannot be attached to these simple expedients, which, in the case of a few choice trees, or even a small orchard, might almost be made to supersede the necessity of any other treatment."

Layering Grape Vines.

After giving a correspondent directions for layering vines, the *Farmer* and *Gardener* says, we would, however, caution our readers as to the danger of layering too much of the wood of a vine. Nothing exhausts the latter more rapidly than layering. It will reduce the crop of fruit for the ensuing year, and weaken the vine for years. From our layering vines we expect no fruit, nor more than three or four years of life. Never layer a bearing vine if you wish to keep it healthy and productive.

To have Apples every Year.

A correspondent of the New York *Tribune*, tells three ways of having apples every year. We give them for what they are worth, although we do not consider them infallible—No. 1 is certainly not to be depended upon—and No. 3 is to be demonstrated before we believe:

1. Take scions from a tree in 1873 and put them into a good thrifty tree, and do the same in 1874, and you will get fruit in alternate years.

2. If you cut off the thrifty trees the growth of 1873 in the last of June, leaving three or four buds that would come out in 1874, you would force out the next year's buds and gain one year.

3. If you remove all the blossoms on one-half of your trees in the bearing year you will have fruit on that half the odd years. These things I have done successfully. I have now in bearing the Victory apple of the odd year produced in this way; next year the scions of the last year will bear in the regular order.

Ashes in the Orchard.

D. W. Kauffman, of Des Moines, Iowa, writes to the Iowa *Homestead* that ashes are worth one dollar per bushel to put about fruit trees, and that he would not sell his ashes at that price and do without their use in the orchard. He has used ashes about fruit trees for fifteen years, and during that time has never seen a borer where ashes were used. The borer is a terrible pest to the fruit-grower, and if all other impediments to successful growing were as easily overcome and completely controlled as the borer, then fruit growing would be very successfully practiced.

At the recent meeting of the Fruit-growers' Association of Ontario, Mr. Moodie stated that he had been in the habit of using unleached ashes as a manure for his fruit trees, and that he values them more highly for this purpose than barn-yard manure. If our farmers knew the value of wood ashes for the garden and orchard and farm, they would not sell them for a few cents per bushel. The ashes that they barter for a few pounds of soap would, if applied to the soil, so increase their crops of fruit and grain as to yield ten times the value they now get for them.

Mulching Fruit Trees in Autumn.

There is no general or sweeping rule which can be applied to manuring and stimulating trees. Some are already in a thrifty, rapidly growing condition, and do not need any pushing; others are stunted, feeble or exhausted, and it is important that these be assisted by manuring. Every cultivator will readily perceive, by an examination of the annual shoots, what is the proper treatment to be given to his trees. Young trees which have made a summer's growth of three feet, more or less, or bearing trees with annual shoots a foot or two long, are growing fast enough. But if the shoots are not over a foot on young trees (and they are often seen only a few inches), and only half that length on older ones, they need special attention.

There are two causes that operate in retarding vigor. One, and a very powerful one, is neglecting the ground and allowing trees to grow in weeds and grass. Unless the soil possesses great natural fertility, this want of clean culture will operate strongly against them, especially if the tree be young or newly transplanted. The other retarding cause, is bearing heavy crops. The only remedy for this feebleness,

to be applied at this season of the year, is a top-dressing of manure, to give the trees an early start next spring. The earlier in the autumn that this application is made, the better will be the result. The autumn rains will wash out the soluble parts and carry them into the soil; and the fibrous portions of the manure which remain will protect the surface of the earth from severe freezing in winter. This topdressing is useful even if applied late in autumn, or even after the ground is frozen.

The objection which we sometimes hear, that the manure will wash away on frozen ground, contradicts itself. For if the weather is warm enough for rain to fall, or for snow to melt, or for the thawing of the manure heap, it will at the same time be warm enough to thaw the surface of the ground, and enable it to absorb all the fertilizing portions of the liquid manure. We speak from our own experiments, and never in any case could discover that this washing extended beyond the roots of the trees.

Cranberries in Massachusetts.

A company was formed a few years ago to raise cranberries on a certain field of marsh land purchased as adapted to that culture. One hundred acres were purchased for $23.

About 22 acres, including a part of two of these swamps, have been prepared by ditching, turning over the turf, and covering it about seven inches thick with gravel and then setting out the vines about a foot apart each way, the work being all under the charge of the Brothers Stockwell. Last autumn they gathered from these 22 acres over 400 bushels of cranberries, sold in Millbury, Worcester and Webster for $10.50 per barrel, three bushels to the barrel. The yield in some places was very large, 15 bushels being picked from one square rod, and 15 square rods yielded at the rate of 330 bushels per acre. A plot of six acres yielded at the rate of 325 bushels per acre; 15 or 20 men, women and children, were engaged in picking at two cents a quart, many earning two dollars a day. One man picked four bushels in a day. It is expected, when the ground is well covered with vines, that the yield will be much larger than it was last year. There are three dams and a reservoir. When there is any danger of a frost, all the ditches that surround the squares in which the plots are laid out can be at once filled with water, which prevents any injury to the fruit and vines; and all can be easily flooded through the winter, which not only protects the vines from freezing, but saves them from the cranberry worm. The company had last autumn expended $18,000. But experience will enable them to prepare the rest of the ground at a much cheaper rate. They have 75 acres, out of the 100 purchased, suitable for cranberries They have cultivated four different kinds of berries, viz., the Kirke Fiske, which is the earliest, the Cherry, the Bell and the Sutton, which is the largest and the handsomest, but is the latest.

Best Morrello Cherry.

The Cleveland *Herald* says, that the Louis Phillippe is the best of all the sour or half sour cherries. Downing, in his great American Encyclopædia of fruits, says the fruit is large, of a rich dark, almost purplish black red, with a red flesh which is juicy, tender, sprightly and mildly acid; quality very good or best. Free, vigorous and very productive. Barry in his *Fruit Garden*, says it is ripe from the middle to the last of July, and is a very valuable sort for dessert, canning, cooking or market.

Pear Trees and Oxide of Iron.

The *Scientific American* says, the practice of mixing iron scraps, filings, or drilling chips from machine shops, in the soil about the roots of pear trees, is becoming general with some of our best fruit-growers. The health and productiveness of the trees are greatly promoted thereby. Pieces of iron hoops, old scythes, and other useless bits of iron, have long been used by the most successful growers.

ORCHID HOUSE, at Hillfield, near Reigate, England.